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09/926,415	06/19/2002	Bruno Gibello	215504US6PCT	2396
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C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1731	

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/926,415  
Filing Date: June 19, 2002  
Appellant(s): GIBELLO, BRUNO

**MAILED**

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**GROUP 1700**

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Gregory J. Maier  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 23 March 2006 appealing from the Office  
action mailed 15 August 2005.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. However, to simplify matters, the "optional" portion the rejection is not maintained.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

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**(8) Evidence Relied Upon**

3,560,178	MINKLER	2-1971
3,844,497	HARRILL	10-1974
3,467,739	UNDERWOOD	9-1969
5,935,289	ARTERBURN	8-1999

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2, 6-7, 11, 15, 19, 22, 24-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Minkler 3560178 in view of Harrill 3844497, Underwood 3467739 and Arterburn 5935289.

Independent claim 19:

**A method determining breakage of at least one filament of a yarn:**  
**gathering a plurality of filaments into the yarn with a wheel; and monitoring a movement of the wheel to determine whether the at least one filament has broken before breakage of the entire yarn.**

Looking to figures 1 and 4 of Minkler: 14-14-14 is the plurality of filaments that are gathered into a yarn 18 with a wheel 16. Col. 1, lines 51-62 of Minkler discloses monitoring the position of the wheel (Minkler refers to it as a "shoe"). However, Minkler does not indicate that the monitoring is to determine whether at least some filaments are broke – Minkler's apparatus detects when no fibers contact the shoe/wheel (col. 2, lines 66-69). Minkler is completely silent as to what happens when only a portion of the filaments are broke.

It would seem reasonable to expect that Minkler's wheel would also move when just a few filaments are in contact with the wheel. It would also seem to be common sense to have the wheel detect when a yarn is 50% or 90% broke, since such is just as

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worthless as a yarn that is 100% broke. Nonetheless, such speculations are unnecessary because the secondary reference discloses that such is already known.

Harrill discloses adjusting the sensitivity of a sensor so as to detect breakage of only a portion of the fibers (see col. 7, lines 38-55). Underwood (col. 1, lines 48-64; col. 5, lines 55-65; and col. 7, lines 58-60) disclose that partial strands are substandard and detecting whenever a strand is broken or partially broken). Arterburn discloses that once one fiber breaks, the entire bushing usually breaks out (col 1, lines 54-64) and even if it does not it is prudent to restart the bushing to maximize efficiency and reduce variation. Thus it would have been obvious to modify the Minkler apparatus so as to detect when just a few fibers are broken rather than wait for complete breakage. As per col. 8, lines 3-7 of Underwood, the tension of the strand is modified by partial strand break out. It would have been obvious to adjust the Minkler so that the switch is tripped by a change in tension that corresponds to the breakage of less than all the fibers so as to maximize efficiency and reduce variation.

Claim 22: Although there is no antecedent basis for "the lever" – it is clear that the plain reading would be "a lever". Arm 38 of Minkler's figure 2 is a lever that pivots (col. 2, line 37) about an axis.

Claim 24: the wheel has a groove 36 which gathers the filaments – see col. 2, line 33-34.

Claim 28: The wheel pivots and rotates relative to an end – in the same way that Applicant's wheel does.

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Claim 1 is similar to claim 19, but requires a step of drawing streams of molten material to form the filaments. Minkler discloses this at col. 1, lines 25-28.

Claims 2-6, 11 and 26 are clearly met.

Claims 7 and 15: the molten material is glass and thermoplastic. Glass is thermoplastic.

#### **(10) Response to Argument**

It is argued that Minkler does not teach the claimed monitoring step because when Minkler's shoe/wheel is displaced, there is no tension at all, because the filaments have broken. This is not convincing because the rejection does not suggest or require that Minkler discloses this. The secondary references make up for the purported shortcoming in Minkler – see the rejection. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Nevertheless, Examiner does not agree with Appellant's argument; examiner can find nothing which suggests that Minkler's wheel only moves when all of the filaments break as argued by Appellant.

Furthermore, Appellant's assertion that Minkler's wheel moves only when there is complete breakout does not appear to be a reasonable interpretation. Minkler (col. 1, lines 51-56) indicates that strand break-out is detected, but it does not seem reasonable

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to interpret this to be limited to *complete* break-out. Underwood discloses the concept of “partial breakout” at col. 5, line 57 – thus it would seem that one of ordinary skill would recognize partial break-out to be one category covered by Minkler’s usage of the term “break-out”. It is noted that terms often used in patents do not require any degree of completeness, for example, heating a rod or coating a rod does not require that the entire rod is heated or coated. Just one end could be coated or heated. Similarly, it would seem reasonable that one of ordinary skill reading about Minkler’s break-out detector would not interpret it to be limited to only complete break-out. Rather one would more likely view it out as detecting any break-out – including partial break-outs.

It is also argued that Minkler does teach detecting the breakage of at least one filament before breakage of the entire yarn strand. As pointed out above, the claims are not rejected in view of Minkler alone. As an aside: the claims do not require a step of detecting breakage. Rather the claims only require monitoring a position. In other words: the claim apparently does not exclude false positives (i.e. changing a position of the wheel when none of the filaments are broken) or false negatives (i.e. not changing the position of the wheel even though many of the filaments are broken). It does not matter whether Minkler does not detect partial breakage – applicant’s claims are not limited to the disclosed embodiment of detection of partial breakage.

As to Harrill, Underwood and Arterburn, it is argued that they do not make up for the deficiencies of Minkler. The rationale is because none teaches monitoring a position of a wheel to determine whether a tension exerted by the filaments falls below a



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predetermined tension. This is irrelevant because the rejection does not suggest that the secondary references disclose that particular limitation. The rejection points out specific teachings from secondary references and why those specific teachings demonstrate the claimed invention would have been obvious. Since Appellant has not disagreed with Examiner's position that the specific teachings are found in the secondary references, it is deemed that Appellant agrees that those specific teachings are, in fact, contained in the secondary references. To put it another way: it does not matter much that the teachings (that Appellant discusses) in the secondary references do not (by themselves) demonstrate obviousness – because the rejection does not rely on those teachings. See the rejection for the teachings that are relied upon.

It is also argued that Minkler requires complete breakage, and to modify it in the manner indicated in the rejection would require a complete redesign of Minkler. This is not persuasive, because the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Moreover, Examiner does not believe that it would be a "complete redesign" substitution of one tension monitoring arrangement for a superior one is not a complete redesign. It seems to Examiner that it could be done as a minor adjustment – merely by changing the weight balance on the lever would change the level of force needed to trip the sensor. Applicant has not provided any evidence or

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rationale to support the conclusion that the modification is a "complete redesign" that would take anything but routine application of modification of conventional apparatus.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John Hoffmann

Conferees:

Steven Griffin

Patrick Ryan